

CLAIMS

What is claimed is:

- 1 1. A method of producing compensation transforms comprising the steps of:
2 generating a plurality of color reference patches;
3 scanning said patches to produce scanned color space values;
4 measuring said patches with an optical measuring device to produce measured
5 color space values; and
6 creating a compensation table from said scanned color space values and said
7 measured color space values.
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- 1 2. A method according to claim 1, wherein said compensation transforms for CMYK
2 inks are processed for different levels of K using the formula $y = af_0(x) + (1-a)f_1(x)$.
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- 1 3. A method according to claim 1, further comprising the step of interpolating
2 between different levels of K.
3
- 1 4. A method according to claim 1, wherein said color reference patches represents
2 different combinations of inks.
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- 1 5. A method according to claim 1, further comprising the step of transforming a color
2 value of a color patch based on the original ink values of said color patch.
3
- 1 6. A method according to claim 1, wherein said optical measuring device is a
2 spectrophotometer.
3
- 1 7. A method according to claim 1, wherein said compensation transforms are a set of
2 look up tables that map scanned uncompensated CIEL*a*b values to compensated
3 CIEL*a*b values.
4

1 8. A method according to claim 1, wherein said compensation transforms are a set of
2 look up tables that map scanned uncompensated CIEL*a*b values to compensated
3 CIEL*a*b values for different combinations of ink values.
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1 9. A method according to claim 1, further comprising the step of mapping scanned
2 CIEL*a*b values to optically measured CIEL*a*b values by using a CIEL*a*b to
3 CMY transform for said scanning and a CMY to CIEL*a*b transform for said
4 optical measuring device.
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1 10. A method according to claim 1, wherein said compensation transforms are a set of
2 look up tables constructed out of gamut CIEL*a*b values using the least squares
3 algorithm with CIEL*a*b values in the tables that are in gamut.
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